

YOUR FABULOUS BRAIN/MIND

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The normal human brain has approximately ten billion neurons, which are interconnected by more than ten trillion synapses and over 100,000 miles of dendrites (nerve fibers). A transistorized computer capable of performing the brain's known functions (it seems likely that we know only a fraction of its possible functions) would not fit inside Carnegie Hall. The whole of the world's telephone system is equivalent to about one gram of your brain -- a piece the size of a pea! The brain's "memory bank" is capable of storing over 1,000 bits of new information every second from birth until death. It is capable of re-ordering these data in such a vast variety of ways that the number of producible concepts is, for all practical purposes, without limit.

Twenty years ago it was common for psychologists to estimate that we use only ten percent of the brain's capacity. Now they believe that "~~We~~ probably do not use even one percent -- more likely 0.1 percent or less."; thus over ninety-nine percent of its capacity lies fallow. Obviously the vast majority of humans have been content with this situation, but throughout recorded history there has been a sprinkling of individuals who refused to tolerate such a limitation. It is common knowledge that these dissenters, history's creative geniuses, have been responsible for what we call 'progress'.

Some believe that every normal child is a creative genius, but that the enculturation process systematically transforms them into robots, appropriately programmed for perpetuation of the status quo. Societies have developed a great variety of techniques for turning the youth into true believers in the current dogma. The pressures on a young person to conform are tremendous. Once the young mind ceases to struggle against the assailant and offers itself up to the official reality structure, it is immediately rewarded with power. From this point the conditioning process becomes progressively easier, for the mind attempts to preserve that which it "knows to be true", that which "works", thus ensuring stable structures within which to operate. Stable structures allow successful prediction, control, power.

On a global scale the belief that the truisms of my culture (its stable structures) constitute universal truths generates wars. Within a culture the belief that the truths and mores of my clan are superior generates hatred, dissension, social disharmony. On the individual level the belief that my way of cognizing reality has greater merit than any other produces the most sorely felt of all human conditions -- alienation from others. Human misery is intimately bound up with aristocentrism.

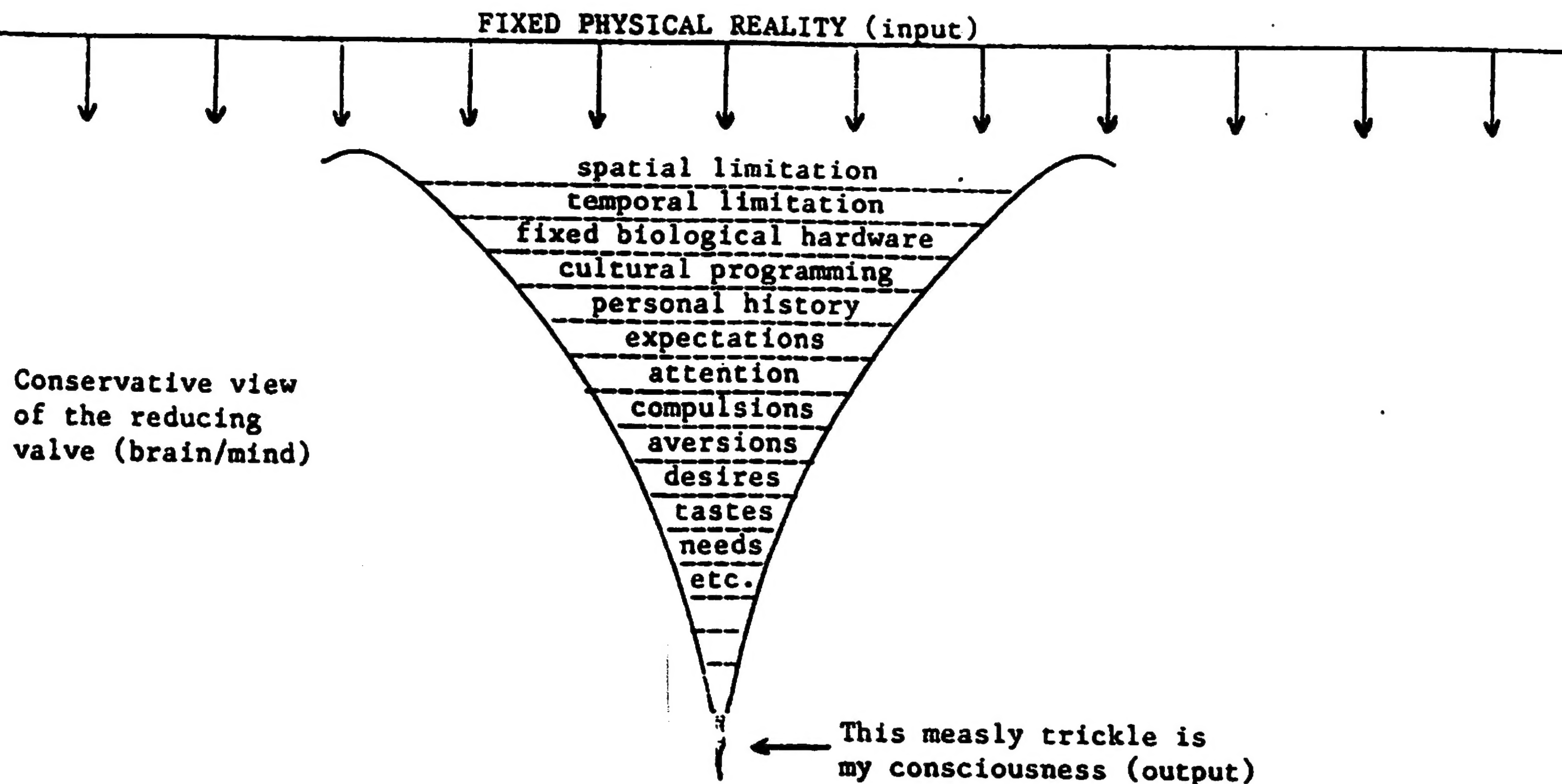
Our limitations are, in the final analysis, self-imposed limitations. It is indeed tempting to avoid responsibility for my condition by resorting to an officially sanctioned causal explanation: My inability is due to genetic factors ("My parents aren't very bright.") or to social factors ("The environment in which I was raised was not conducive to learning."). The extreme popularity of such excuses makes it seem almost masochistic to admit that I chose to accept the limitations. On the other hand, adopting the position that I did not choose them, that they were forced upon me, commits me to the rôle of a helpless puppet. Since science (cognitive knowledge) is incapable of establishing the truth of either position without employing circular reasoning, I am clearly committed to choosing on non-cognitive grounds. If I object to the robot rôle, I must accept the responsibility for my condition. If I wish to alter my condition, I must drop the limitations responsible for it. But those very limitations constitute my social identity. To drop them is social suicide. Thus the great reluctance to change, to learn.

Our refusal to suffer the guilt that would accompany acceptance of responsibility for our ignorance perpetuates the myth that intelligence is beyond our control. We find the myth legitimized both in folklore and in science, the latter of which provides complex reasoning and incontrovertible "facts" which most of us feel unqualified to question, even if we wanted to. Such eminently respectable justification for our laziness blinds us to our great learning potential, and causes us to label the ideas of dissenters 'sheer perversity'. Perverse or not, the view that we grossly under-estimate the powers of our minds has persisted for thousands of years.

There are two major theories of mind, each susceptible of many variations. We might, for want of better terms, call them 'conservative' and 'radical' (but don't associate conservative with old and radical with new, for the radical view is several thousand years old). The conservative theory supports and promotes the currently popular view that mind is an epiphenomenon (a by-product) of a specific set of interactions between parts of physical reality, that is, between the "world out there" and my nervous system, both of which are material things. The mind is seen as a structure composed of fixed biological "hardware" (brain cells and nerve fibers) and modifiable "software" (the brain's programs). The mind receives reports from the external physical world by means of the senses (part of the fixed biological hardware) which it interprets by means of its software. The mind's programs determine the "correctness" of its consciousness, the end product of this process. Consciousness which is "sane", "normal", "mature", etc., "accurately represents the real world". Since it is only the brain's software that is modifiable (without resorting to drastic intervention such as surgery, electric shocks, or chemical assaults), society's efforts to ensure that everyone has a proper "reality orientation" are concentrated upon programming the brain/mind -- called 'education' for those who are proceeding according to plan, and 'therapy' for those who have slipped off the path.

A persistent and tragic oversight plagues most human thought -- we fail to note that all thinking proceeds from a foundation of assumptions. A few of the more insidious common assumptions of our era are: (1) The assumption that reality is rational (which, when coupled with the assumption that the human mind is a rational instrument, yields the "great truth" that the human mind is, in principle, capable of comprehending the entire depth and breadth of reality); (2) the assumption that reality is immune to the act of observation, that is, that by virtue of some unspecified legerdemain, objects "out there in reality" are incapable of noticing that we are observing them (which, among many other consequences, authorizes us to pretend to "objectivity"); (3) the assumption of linearity, that is, that reality is non-recursive (not self-generative, not self-energizing, etc.); (4) the assumption that physical reality is basic, and that all non-physical aspects are derivative from the physical. Our understanding of the place of minds in the scheme of things is very much a function of the assumptions which we harbor.

The conservative view of mind assumes a fixed physical reality which exists independently of my awareness, a reality which would continue to exist in the absence of all sentience. My awareness of that reality is subject to a great many potentially distorting factors, which will be called 'filters'. My senses can pick up only a minuscule portion of the spatial extent of physical reality. Concerning its duration, my immediate awareness (awareness unmediated by memory or expectation) is said to be on the order of four seconds. To deal with more protracted periods my brain/mind stores the four-second experiential chunks and mysteriously catalogues them to yield the seriality of personal history. In addition to spatial and temporal limitations, I am made up of many other filters which serve to limit my awareness. With an appropriate set of filters, all in good working order, I am qualified for membership in a society. A partial list of commonly required filters is displayed below.



The fundamental difference between the conservative and radical views of mind is that the former takes physical reality as the given whence all awareness springs, whereas the latter alleges Mind (not a mind) to be the surd. Of course the radical view can no more "prove" that Mind is the source of all than the conservative view can prove that physical reality is the source, but many leading physicists of the last half century have believed that evidence favors the radical view*. Of these, Sir James Jeans says it most succinctly:

Today there is a wide measure of agreement, which on the physical side of science approaches almost to unanimity, that the stream of knowledge is heading towards a non-mechanical reality; the universe begins to look more like a great thought than like a great machine. Mind no longer appears as an accidental intruder into the realm of matter; we are beginning to suspect that we ought rather to hail it as the creator and governor of the realm of matter. (from The Mysterious Universe, 1932)

More recently Karl Popper, held by many to be the greatest living philosopher of science, made essentially the same point somewhat more cautiously:

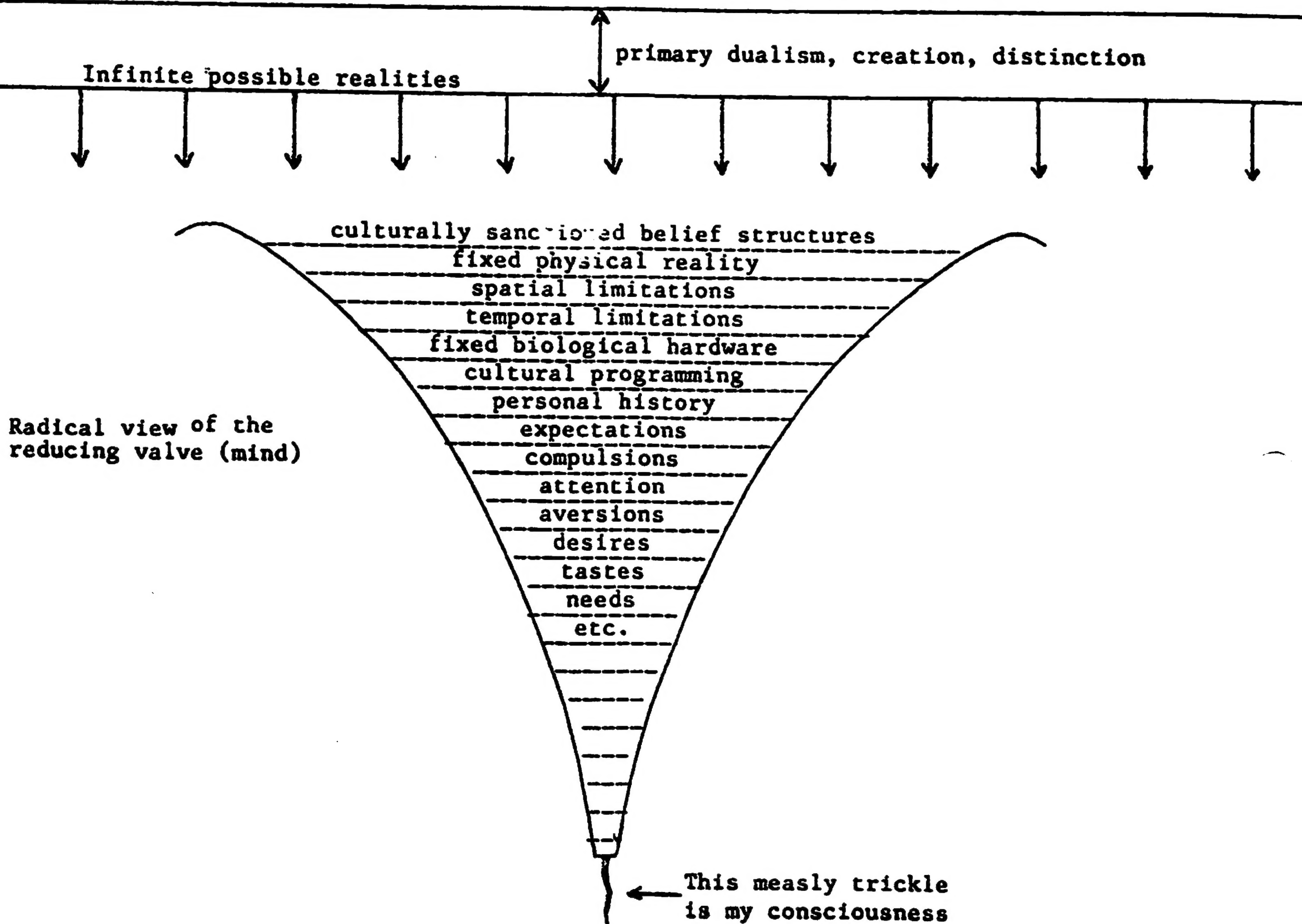
The incredible thing about the human mind, about life, evolution, and mental growth is the interaction, the feedback, the give and take [between our minds and their products], which helps us to transcend ourselves, our talents, our gifts.

*Physicists are singled out for attention because the popular conception of physics is that its province is limited to matter in motion, and because physics is a currently fashionable discipline. Philosophers have championed the radical view of mind for eons, but the populace rarely listens to philosophers. It may be worthy of note that all of the world's religions (construing 'religion' in the usual narrow sense) have always held to some version of the radical view.

It is this self-transcendence which is the most important fact of all life and of all evolution. This is the way in which we learn; and we can say that our mind is the light that illuminates nature. (from Mind in Nature, edited by R. Q. Elvee, Harper and Row, 1982, p. 57)

Below is a diagram of the radical view. Note that fixed physical reality is here taken to be one of the limiting factors, generated by culturally sanctioned belief structures which the individual has introjected, whereas in the conservative picture it was the ultimate source.

THE SOURCE, MIND, PURE CONSCIOUSNESS, THE VOID, SUNYATA, GOD, THE ABSOLUTE, DHARMADHATU, THE ONE, BRAHMAN, THE NAMELESS, THE INFINITE, TAO, etc.



It is evident that ordinary waking consciousness is extremely restricted according to both theories of mind. To expand one's consciousness beyond the confines of a highly conditioned reality requires elimination of the filters. In the course of thousands of years of effort to transcend ordinary consciousness many techniques have been developed. All of the techniques have merit, but a given technique may be effective for some persons and not for others. Furthermore, most of the techniques require a degree of discipline and tenacity which most people are unwilling to muster — they prefer the

easy path, the path of robot-like self-indulgence.

In matters of the mind, each should seek out the path best suited to its uniqueness. But there is a caution to be observed: The conviction that The Truth has been attained is a trap set for the careless. Sages from all traditions have taught that the human mind is incapable of comprehending The Truth; the mistaken belief that some transient truth is final leads to great misery. Unfortunately, there is always an abundance of small minds who zealously distort the teachings to suit their own passions. Before applying your "I Found It!" bumper sticker, consider very carefully what you are about to do!

There may come a time in human history when the deliberate, systematic constriction of consciousness now practiced by societies will be viewed as a crime more heinous than genocide.

SUGGESTIONS FOR FURTHER READING:

Of the thousands of books and articles dealing with this area, here are a few suitable for the general reader.

- Bateson, Gregory, Steps to an Ecology of Mind, Ballantine, 1972.
Bentov, Itzhak, Stalking the Wild Pendulum, Dutton, 1977.
Brown, Barbara, Supermind, Harper and Row, 1980.
Capra, Fritjof, The Tao of Physics, Shambhala, 1975; The Turning Point, Simon and Shuster, 1982.
Ferguson, Marilyn, The Aquarian Conspiracy, Tarcher, 1980.
Goleman, Daniel, The Varieties of the Meditative Experience, Dutton, 1977.
Goleman-Davidson, Consciousness: Brain, States of Awareness, and Mysticism, Harper and Row, 1979.
Govinda, Lama Anagarika, Creative Meditation and Multi-Dimensional Consciousness, Theosophical Pub., 1976.
The Psychological Attitude of Early Buddhist Philosophy, Weiser, 1974.
Grof, Stanislav, Realms of the Human Unconscious, Dutton, 1967.
Hampden-Turner, Charles, Maps of the Mind, Macmillan, 1981.
Hofstadter, Douglas, Gödel, Escher and Bach, Basic Books, 1979.
Huxley, Aldous, The Doors of Perception, Harper, 1954.
Jaynes, Julian, The Origin of Consciousness in the Breakdown of the Bicameral Mind, Houghton-Mifflin, 1976.
Kapleau, Philip, The Three Pillars of Zen, Beacon, 1965.
Koestler, Arthur, Janus, Vintage, 1979.
Needleman, Jacob, The Sword of Gnosis, Penguin, 1974; A Sense of the Cosmos, Dutton, 1965.
Pirsig, Robert, Zen and the Art of Motorcycle Maintenance, Bantam, 1974.
Roszak, Theodore, Where the Wasteland Ends, Anchor, 1973.
Rowlands, Peter, Gifted Children, London, J. M. Dent, 1974.
Russell, Peter, The Brain Book, Hawthorn, 1979.
Saint John of the Cross, Dark Night of the Soul, Doubleday 1975.
Samuels, Mike and Nancy, Seeing With the Mind's Eye, Random House, 1976.
Schuon, Frithjof, The Transcendent Unity of Religions, Harper, 1975.
Tart, Charles, States of Consciousness, Dutton, 1975.
Trungpa, Chögyam, Cutting through Spiritual Materialism, Shambhala, 1973.
Wilber, Ken, No Boundary, Center Publications, 1979.
Zukav, Gary, The Dancing Wu Li Masters, Morrow, 1979.